North Carolina Department of Agriculture and Consumer Services

IT Plan

2009-2011 Biennium

State CIO
Departmental/Agency IT Plans
2009-2011 Biennium

NCDA&CS IT Plan

September 30, 2008

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MAJOR FACTORS INFLUENCING THE PLAN:

Agency Mission Statement

The mission of the Department of Agriculture and Consumer Services is to improve the state of agriculture in North Carolina by providing services to farmers and agribusinesses, and to serve the citizens of North Carolina by providing services and enforcing laws to protect consumers.

Goals

- Maintain and enhance agriculture's ability to provide an adequate, wholesome supply of food and natural fiber through cooperative research efforts with NC State University and NC A&T State University.

- Protect consumers from unsafe food products and unlawful business practices through programs of inspections and enforcement of laws and regulations.

- Prevent the spread of animal and plant diseases and pests, and assist farmers in preparing for and responding to catastrophic events.

- Increase sales of agricultural products grown or produced in North Carolina by continuous promotional campaigns such as "Got To Be NC."

- Preserve farmland and other agricultural and natural resources by drawing attention to their importance to the State's economy and quality of life.

- Encourage the safe and effective use of fertilizers and pesticides to protect the environment for the benefit of future generations.

- Highlight agriculture's many contributions to the State's economy, history, and future through agricultural fairs, news releases, promotional campaigns, public exhibitions, and publication of agricultural statistics.

- Carry out departmental programs in an efficient and cost-effective manner and work to continuously improve the quality of services provided to the citizens of North Carolina.

Agency IT Mission Statement

The Information Technology System Services mission is to offer the best possible IT solutions to our users as efficiently as we can. This is to include data security, integrity, and availability. We strive for this not only for our agency, but for the consumers of North Carolina.

In order to support these goals, Information Technology has initiated the following projects:

- We have implemented the use of tablet PCs for the inspectors and they now fill out their inspection forms electronically.

- Install a flash media server that will allow the Department to promote agriculture products grown or produced in North Carolina.

- Put a Laboratory Information Management System (LIMS) in place at the Food & Drug Lab to track samples received into the Lab.

- Seek funding through a grant to rewrite the current LIMS system in the Agronomic Lab. This Lab does over 300,000 soil samples per year free of charge to farmers as well as non-farmers.

Current Situation and Desired State of Major IT Applications/Infrastructure Assets, Personnel, Projects, and Management Functions

Application Name	Agency Application ID	2007	2008	2009	2010	2011	2012	2013	New Retirement Date
Agricultural Review System	**AgReview**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Agronomic Lab Information System		Maintain	Enhance	Enhance	Enhance	Maintain	Maintain	Maintain	12/31/2013
Animal Health Programs Database (AHP)	**MHTD AHP**	Consolidate	Maintain	Enhance	Enhance	Maintain	Maintain	Maintain	12/31/2013
Applicant Tracking		Maintain	Maintain	Maintain	Replace				12/31/2010
Aquatic Dealer Permit		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Assessments System	**CXA200**	Maintain	Maintain	Replace					12/31/2009
Departmental Licensing System	**Lic**	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Duplicating Services Chargeback System	**ANA600**	Maintain	Retire						12/31/2008
F&V Terminal Market/Shipping Point		Maintain	Maintain	Enhance	Maintain	Maintain	Maintain	Maintain	12/31/2013
Feed Lab System	**FBA500**	Maintain	Consolidate						12/31/2008
Feed Registration System	**FBA000**	Maintain	Maintain	Replace					12/31/2009
Feed Report System	**FBA700**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Feed Tonnage System	**FBA200**	Consolidate							3/31/2007
Feed Transcript System	**FBA150**	Maintain	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Fertilizer Inspector Reporting System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Fertilizer Lab System	**FFA100**	Maintain	Consolidate						12/31/2008
Fertilizer Penalty System	**FFA200**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Fertilizer Registration System	**FFA100**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Fertilizer Tonnage System	**FFA300**	Consolidate							12/31/2007
Fertilizer Transcript System	**FFA150**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Food Distribution Tracking System	**FDTS**	Maintain	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
FS Billing	**FSBNET**	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Grain Grading Certificates	**GRAINCERT**	Maintain	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Gypsy Moth System		Maintain	Retire						12/31/2008
Horse Feed Assessments		Consolidate							9/30/2007
Limestone Tonnage System	**FFA400**	Maintain	Consolidate						12/31/2008

Application Name	Agency Application ID	2007	2008	2009	2010	2011	2012	2013	New Retirement Date
Market News Grain		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Market News Livestock System		Maintain	Replace						12/31/2008
Market News Poultry System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Milled Peanut Certificates	MCERT	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Motor Fuel Registration System	GOA100	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Mountain State Fair Clogging, Mountain Music & Gospel Singing		Maintain	Retire						12/31/2008
Mountain State Fair Display Livestock		Maintain	Retire						12/31/2008
Mountain State Fair Div I&III		Maintain	Retire						12/31/2008
Mountain State Fair Exhibitor & Concessionaires	EXHCON	Maintain	Maintain	Enhance	Maintain	Maintain	Maintain	Replace	12/31/2013
Mountain State Fair Flower & Garden		Maintain	Retire						12/31/2008
Mountain State Fair Livestock Show		Maintain	Retire						12/31/2008
Mountain State Fair Llama Show		Maintain	Retire						12/31/2008
Mountain State Fair Poultry & Pigeon Show		Maintain	Retire						12/31/2008
Mountain State Fair Rabbit Show		Maintain	Retire						12/31/2008
Multi-Hazard Threat Database	MHTD	Maintain	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
NCDA&CS Cotton Boll Weevil Automated Acreage Assessment Application		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Noxious Weed Phytosanitary Tracking State		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Nursery Phytosanitary Tracking Federal		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Nursery Phytosanitary Tracking State		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Office Supplies Inventory System	ANA200	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Pesticide Inspector Activity System	PestIAS	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Pesticide Recertification System	PestRecert	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Pesticide Registration	PAA200	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Plant Conservation Permit Inspection Reporting System Online		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013

Application Name	Agency Application ID	2007	2008	2009	2010	2011	2012	2013	New Retirement Date
Rhapsody	Rhapsody	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Seed Analysis System		Maintain	Maintain	Maintain	Replace				12/31/2010
Seed Assessments System		Maintain	Consolidate						12/31/2008
Seed Germination Laboratory Information System		Enhance	Consolidate						12/31/2008
Seed Input Laboratory Information System		Maintain	Consolidate						12/31/2008
Seed Inspector Reporting System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Seed Planting Laboratory Information System		Maintain	Consolidate						12/31/2008
Seed Purity Laboratory Information System		Enhance	Consolidate						12/31/2008
Seed Reporting Laboratory Information System		Enhance	Consolidate						12/31/2008
Seed Tetrazolium Laboratory Information System		Maintain	Consolidate						12/Tetra2008
Setoff Debt Collection System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Soft Serve System	FBA300	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Standards Lab Scheduling System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
State Fair Advanced Ticket Sales	SFADVSALES	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
State Fair Arts and Photo Exhibition		Retire							12/31/2007
State Fair Entry System		Retire							12/31/2007
State Fair Event Management System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
State Fair Folk Festival		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
State Fair Livestock Exhibition		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
State Mail list System	MOA600	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Structural Pest Automated Inspection System	AIS	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Structural Pest Control Inspection & Billing System	SWA300	Maintain	Maintain	Replace					12/31/2009
Structural Pest Control Recertification System	SWA400	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Temporary and Part-time Payroll System	TPTP	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Veterinary LIMS	Vet-LIMS	Enhance	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	12/31/2013
Witch weed		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013

Application Name	Agency Application ID	2007	2008	2009	2010	2011	2012	2013	New Retirement Date
Employee Training System		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Seed Laboratory Information System Service Reporting		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Seed Laboratory Information System Official Reporting		Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Farmer's Markets Gate Receipts System	GATE	Enhance	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	12/31/2013
Marketing Egg law System	EGGLAW	Enhance	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	12/31/2013
Rapid Entry Program for Market News	REP	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013
Tonnage System	Tonnage	Enhance	Enhance	Maintain	Maintain	Maintain	Maintain	Maintain	12/31/2013

Current Projects

NCDA&CS Email Consolidation
Telephone System replacement
LIMS for Food & Drug
Rewrite Seed System
Tablet PCs and Mi Forms implementation for Pesticide Inspectors
Bar code project for soil sample deliveries at the Agronomic Lab
Web Grant Tracking System
Installation of a Flash Media Server
Learning Management System for Element K rollout
Wireless installation at the Mountain Fair in Fletcher
Time clock installation for the NC State Fair

Infrastructure Assets

Asset Type	Quantity	Comments
Workstations	796	
Notebooks	384	
Tablets	39	
Printers	716	
Servers	55	20 of the servers belong to the Emergency Programs Division. Some servers are in remote locations.

Tablets are being used in the field with the Pesticide inspector with a forms application, Mi-Forms.

Workstation and notebook replacements are based on a three or four year cycle depending on what the warranty states. Servers are replaced on a four year cycle and printers are replaced as needed.

NCDA&CS has standardized on the XP platform. NCDA&CS has standardized on MS Office 2003.

Application servers are Windows 2003. File and Print servers are Novell. Servers located in office outside of 2 W. Edenton Street are file and print servers which run Novell.

Operations/IT Management

IT Governance	Unsatisfactory	Good	Very Good	Outstanding	Comments
Budgeting		X			Even though IT does not have its own budget, the Department supports IT to get their business accomplished with appropriate funding.
Investment Justification		X			We are broadcasting to all Divisions what other Divisions are doing so if a Division has a similar need we can work together. We also have a governing body of executive management that supports any investments IT and the Divisions make.
Project Management		X			We are currently recruiting for a first-time, full-time project manager for the Department.
Applications Management			X		We update where all the applications (new and modified) currently are every quarter. The executive management makes determination on what projects are modified or started.
Asset Management	X				We do not have a current inventory for everyone. Field people with slow connections cannot connect to the server to update their inventory.
Internal Agency Consolidation

Internal Agency Consolidation Cont'd. | | X | | | Strides have been made in the Department toward consolidation. Agency IT personnel meet monthly to discuss IT projects and any time saving techniques. Code repository workgroup has formed and is underway to get this project off the ground. Very few people have attended ITIL training with mixed reviews. Division email systems are being consolidated into one agency e-mail system and then into one enterprise email system. A generator for switch room is in place and one for the application server room has been procured and awaiting installation. |
| Purchasing | | | X | | All IT purchases require CIO review and approval. |

IT Governance	Unsatisfactory	Good	Commendable	Outstanding	Comments
Vendor Management		X			In regard to IT, few vendor contracts are in place. Currently there is one project manager contractor and one developer in place.
Security Management		X			Some Departmental polices are in place and others need to be developed such as an internal email policy.
Service Management		X			The Department has governance in place and reviews outstanding programming requests from users. However better change management processes need to be put into place.
UMT		X			New PM needs training on the UMT system.
ITIL	X				Additional staff needs to be trained and the trained staff needs to be onboard with implementation.

Human Resources

Job Title	Full Time Employees	Contractors	Total	Comments
Bus. and Technology Analyst	18		18	
Bus. and Tech. Specialist	2	1	3	The contractor is currently working on a Grants tracking system.
Bus. and Tec. Technician	6		6	
Network Specialist	1		1	
Oper. & Systems Technician	1		1	
Technology Support Analyst	8	1	9	Co op from Wake Tech helps us out.
Technology Support Specialist	1		1	
Technology Support Technician	1		1	

1 Business Analyst – NCDA&CS needs improvement in aligning technology with business needs. This position would be able to gather and translate non-technical user requirements into technical format and structure.

Training Needs

NCDA&CS offers training to its employees to help them with new skills as well as advancing their current skill set.

We have purchased Element K, for one example, for all programmers in NCDA&CS and we are working toward a training track that all programmers in NCDA&CS would need to take and pass with an 80% passing rate.

IIIL training is not seen as vital as this time to the staff who has taken it. The greatest drawback seems to be how will it come to fruition?

Use of Supplemental Staffing

NCDA&CS currently has two contractors on staff. It would be beneficial to use the ITS Supplemental Staffing Contract and have the contract available for up to one year to provide flexibility.

Also NCDA&CS did not have a PM on staff so we are using ITS's Project Management Office to fulfill our need.

Major Initiatives and Investments

The following IT improvements and recommendations are based upon Executive Management's direction on current NCDA&CS IT services.

These IT goals are designed to support the business functions of the NCDA&CS and to ensure compliance with the State IT standards.

Name: Oracle Server Upgrade
Summary: We will move the existing Oracle 8i database.
Problem: The current server is out of warranty and we do not have an Oracle database administrator on staff to perform the move.
Major objective: We perform over 300,000 soil samples per year for farmers and citizens in the State of North Carolina as a free service. If a major happenstance were to happen to the server, we may not find parts needed to replace on the outdated box.
Approach: We are using the State's Oracle contract to hire a certified Oracle DBA to perform the work.
Timeframe: This should be completed in the 4th quarter of 2008.
Major Risks: This system is used quite a bit and we are about to enter into the busy season so it is crucial that the server and data keep their integrity.
Funding: Funding has been identified.

Name: Online Payment for License system
Summary: Funding was identified in 2000 for this project however it was pulled just as the contract was awarded.
Problem: The business owners in North Carolina would like to apply for a license and pay the fees associated with the license via a web browser.
Major objective: The major objective is to open up online payments in the Department. We have 80,000 licensed citizens in the state of North Carolina who fill out paperwork by hand and mail in their application with a check. This requires us to fill space (real estate) with file cabinets to hold the paperwork instead of storing the applications in a database. It would also take away the fee for bounced checks. At least $20,000 a year is spent on bounced checks.
Approach: We would see how Wildlife is currently doing their online system and learn from them and their experience. We would hire a contractor and would have a dedicated staff developer as well as project manager onboard.
Timeframe: This project would be completed by June 2009.
Major Risks: Electronic payment services and this would be the first application of its kind in the Department**.**
Funding: Funding has been identified.

Name: Agronomic Laboratory Information Management System (LIMS)

Summary: The current LIMS software was developed in 1994 to automate data acquisition and other computing activities for improved accuracy in data management and to shorten turnaround time in delivering reports to North Carolina citizens via an electronically retrievable system.

Problem: Since the time of its original implementation, sample volume for our three labs has increased by 45% (395,094 in 2008) with a corresponding increase of 31% in advisory reports. Demand for our services is due to the dire economics of agriculture, increased environmental concerns and regulation, adoption of nutrient management, and advent of new technology (GPS). To continue to meet these demands, position our labs for another decade of service, and replace an out-of-date LIMS, a new LIMS is essential.

Major objective: Two objectives of this project are to vastly improve our quality assurance/quality control (QA/QC) program and also our abilities to analyze and summarize soil fertility, plant nutrition, and nematode status relevant to crops across the state.

Approach: After a formal business requirements analysis, a plan will be proposed to have LIMS designed for each laboratory, starting with the smallest lab; this will enable a framework that possibly can be used for larger labs in making the process more efficient. The components of LIMS for each lab will go through a phases of design, testing, modification, implementation and employee training.

Timeframe: The first laboratory would be in production by January 1, 2010.

Major Risks: That funding will not be approved through our grant request, that processes and work flow will not be improved by the new LIMS and the laboratory personnel will not be on board with the proposed system. It is important to get buy in from everyone up front. This is a completely new system.

Funding: We are waiting to see if our grant request will be awarded. This should take place in October.